NORTH DAKOTA PUBLIC EMPLOYEES RETIREMENT SYSTEM (NDPERS)

NDPERS 2021 RETURN ANALYSIS AND DESIGN OPTIONS

Prepared by:

Pension Integrity Project at Reason Foundation

October 28, 2021



About the Pension Integrity Project



We offer pro-bono technical assistance to public officials to help them design and implement pension reforms that improve plan solvency and promote retirement security, including:

- Customized analysis of pension system design, trends
- Independent actuarial modeling of reform scenarios
- Consultation and modeling around custom policy designs
- Latest pension reform research and case studies
- Peer-to-peer mentoring from state and local officials who have successfully enacted pension reforms
- Assistance with stakeholder outreach, engagement and relationship management
- Design and execution of public education programs and media campaigns

Policy Objectives



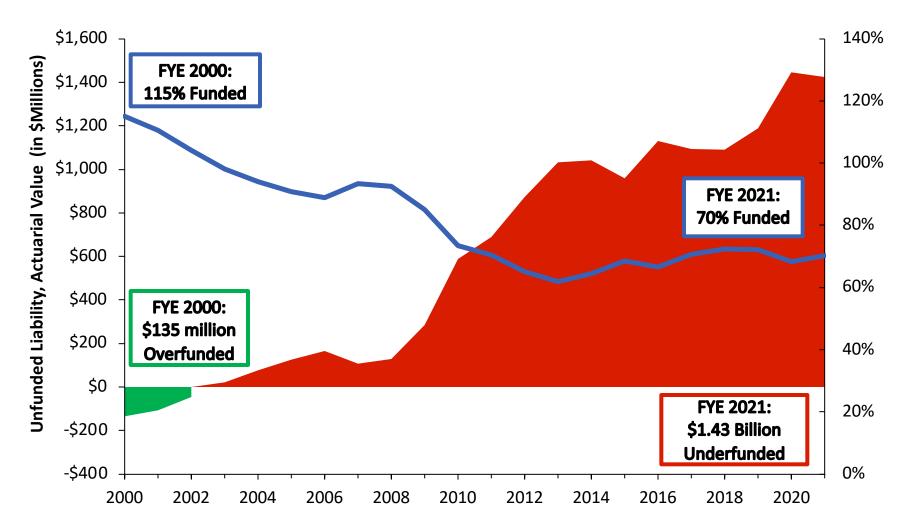
- Keeping Promises: Ensure the ability to pay 100% of the benefits earned and accrued by active workers and retirees
- Retirement Security: Provide retirement security for all current and future employees
- Predictability: Stabilize contribution rates for the long-term
- Risk Reduction: Reduce pension system exposure to financial risk and market volatility
- Affordability: Reduce long-term costs for employers/taxpayers and employees
- Attractive Benefits: Ensure the ability to recruit 21st Century employees
- Good Governance: Adopt best practices for board organization, investment management, and financial reporting



CHALLENGES FACING NDPERS

A History of NDPERS Solvency (2000-2021)

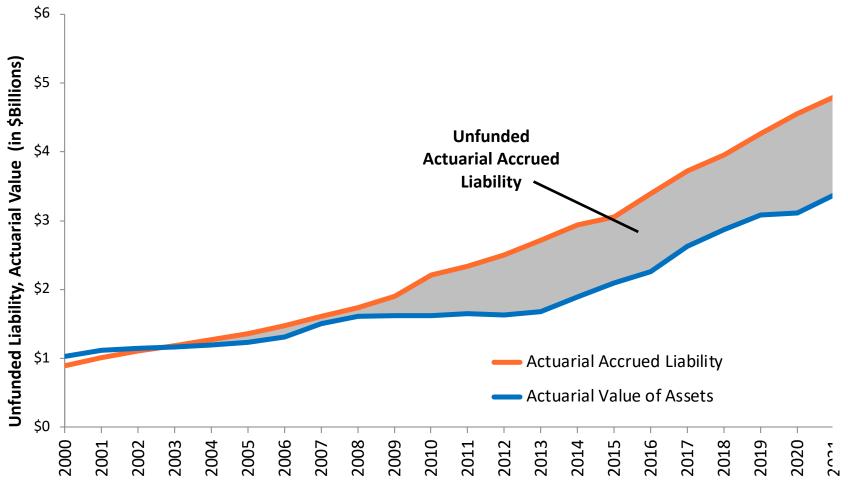




Source: Pension Integrity Project analysis of NDPERS actuarial valuation reports and CAFRs.

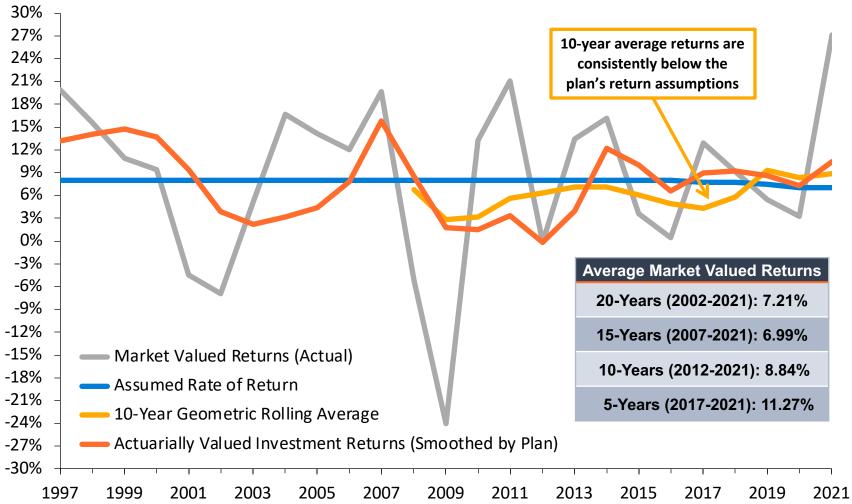
NDPERS Liabilities are Growing Faster than Assets





Investment Returns History, 1997-2021





Source: Pension Integrity Project analysis of NDPERS actuarial valuation reports and CAFRs. The Assumed Rate of Return was 8% 1997-2017, 7.75% in 2017-18, 7.5% in 2018-19 and 7.0 in 2020.

Investment Returns Have Underperformed



- NDPERS actuaries have historically used an 8% assumed rate of return to calculate member and employer contributions, slowly lowering the rate to 7.0% over the past two decades in response to significant market changes.
- NDPERS expanded its low transparency, high-risk alternative asset holdings in a search for greater investment returns (greater yields)
- Average long-term portfolio returns have not matched long-term assumptions over different periods of time:

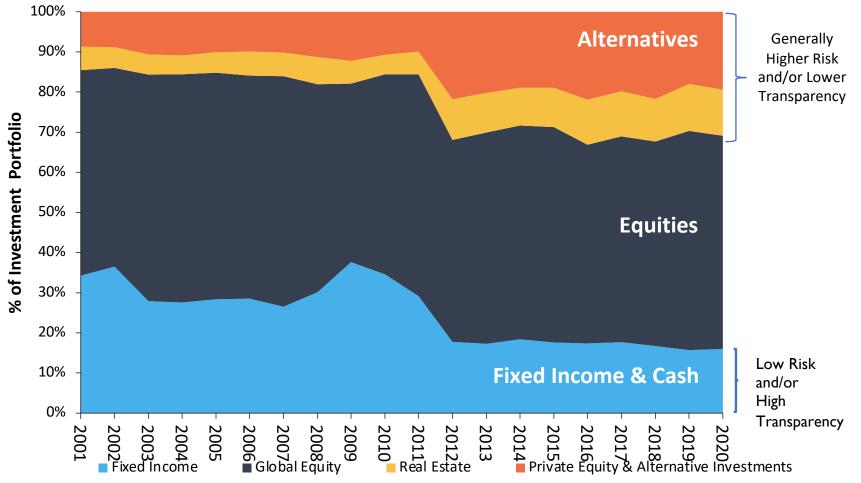
Average Market Valued Returns	Average Actuarially Valued Returns
20-Years (2002-2021): 7.21%	20-Years (2002-2021): 6.39%
15-Years (2007-2021): 6.99%	15-Years (2007-2021): 7.11%
10-Years (2012-2021): 8.84%	10-Years (2012-2021): 7.65%
5-Years (2017-2021): 11.27%	5-Years (2017-2021): 8.90%

Note: Past performance is not the best measure of future performance, but it does help provide some context to the problem created by having an excessively high assumed rate of return.

NDPERS Asset Allocation (2001-2020)

Expanding Risk in Search for Yield





New Normal: The Market Has Changed



The "new normal" for institutional investing suggests that achieving even a 6% average rate of return in the future is optimistic.

- 1. Over the past two decades there has been a steady change in the nature of institutional investment returns.
 - 30-year Treasury yields have fallen from near 8% in the 1990s to consistently less than 3%.
 - New phenomenon: negative interest rates, designates a collapse in global bond yields.
 - The U.S. just experienced the longest economic recovery in history, yet average growth rates in GDP and inflation are below expectations.
- 2. McKinsey & Co. forecast the returns on equities will be 20% to 50% lower over the next two decades compared to the previous three decades.
 - Using their forecasts, the best-case scenario for a 70/30 portfolio of equities and bonds is likely to earn around 5% return.

Probability Analysis: Measuring the Likelihood of NDPERS Achieving Various Rates of Return

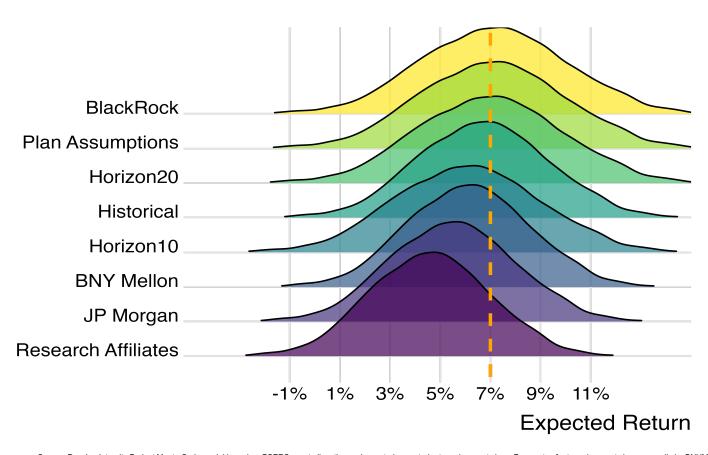


Probability of NDPERS Pension Plan Achieving A Given Return Based On:										
Possible Rates of Return	Plan Assumptions & Experience		Short-to-Mid Term Market Forecast			Long-Term Market Forecast				
	Based on NDPERS Assumptions	NDPERS Historical Returns	Horizon Market 10-yr Market Forecasts	BNY Mellon 10-yr Market Forecasts	JP Morgan 10-15 yr Forecast	Research Affi. 10-yr Market Forecasts	Horizon 20-yr Market Forecasts	BlackRock 20-yr Market Forecasts		
9.00%	25.3%	18.7%	16.1%	12.2%	8.2%	3.3%	24.0%	26.1%		
8.00%	37.3%	30.8%	25.4%	22.1%	16.0%	8.0%	35.8%	38.4%		
7.50%	43.9%	37.8%	31.2%	28.6%	20.9%	11.5%	42.5%	45.1%		
7.00%	50.9%	45.3%	37.5%	35.8%	27.2%	16.1%	49.5%	51.9%		
6.50%	57.7%	52.8%	44.2%	43.8%	33.9%	21.3%	56.2%	58.6%		
6.00%	64.3%	60.5%	51.1%	51.9%	41.6%	27.9%	63.0%	65.1%		
5.00%	75.8%	73.8%	64.5%	67.6%	57.4%	43.2%	74.5%	76.5%		

Source: Pension Integrity Project Monte Carlo model based on NDPERS 2020 asset allocation and reported expected returns by asset class. Forecasts of returns by asset class generally by BNYM, JPMC, BlackRock, Research Affiliates, and Horizon Actuarial Services were matched to the specific asset class of NDPERS. Probability estimates are approximate as they are based on the aggregated return by asset class. For complete methodology contact Reason Foundation.

Probability Analysis: Differing Probability Distributions





Source: Pension Integrity Project Monte Carlo model based on PSERS asset allocation and reported expected returns by asset class. Forecasts of returns by asset class generally by BNYM, JPMC, BlackRock, Research Affiliates, and Horizon Actuarial Services were matched to the specific asset class of PSERS. Probability estimates are approximate as they are based on the aggregated return by asset class. For complete methodology contact Reason Foundation. Probabilities projected in Horizon 20 – Year Market Forecast column reflect 2021 reported expected returns. Horizon is an external consulting firm that surveyed capital assumptions made by other firms.

Probability Analysis: Measuring the Likelihood of NDPERS Achieving Various Rates of Return



NDPERS Assumptions & Experience

- A probability analysis of NDPERS historical returns over the past 20 years (2000-2019) indicates a modest chance (45.3%) of hitting the plan's 7.0% assumed return.
- NDPERS' own investment return forecasts only imply a 50.9% chance of achieving their investment return target over the next 20 years.

Short-Term Market Forecast

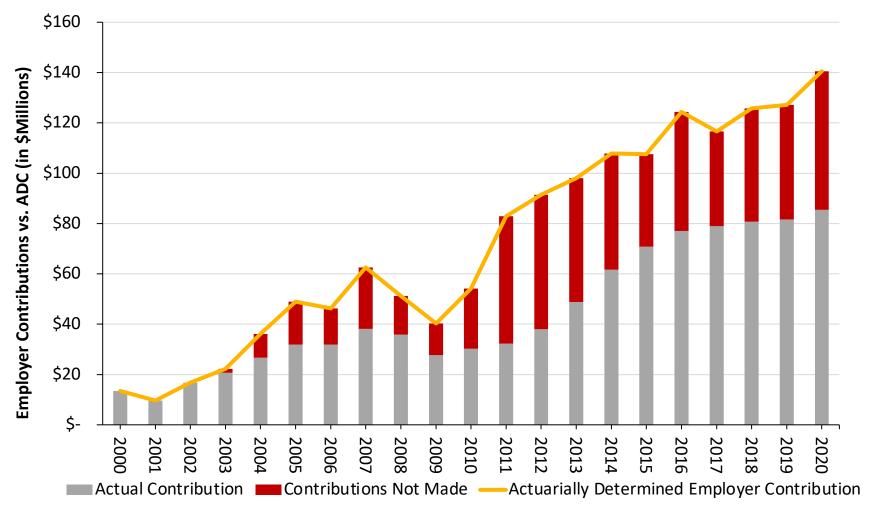
- Returns over the short to medium term can have significant negative effects on funding outcomes for mature pension plans with large negative cash flows like NDPERS.
- Analysis of capital market assumptions publicly reported by the leading financial firms (BlackRock, BNY Mellon, JPMorgan, and Research Affiliates) suggests that over a 10-15 year period, NDPERS returns are likely to fall short of assumptions.

Long-Term Market Forecast

- Longer-term projections typically assume NDPERS investment returns will revert back to historical averages.
 - ✓ The "reversion to mean" assumption should be viewed with caution given historical changes in interest rates and a variety of other market conditions that increase uncertainty over longer projection periods, relative to shorter ones.
- Forecasts showing long-term returns near 7.0% being likely also show a significant chance that the actual long-term average return will fall far shorter than expected.
 - ✓ For example, according to the BlackRock's 20-year forecast, while the probability of achieving an average return of 7.0% or higher is about 52%, the probability of earning a rate of return below 5% is about 24%.

Actual v. Required Contributions



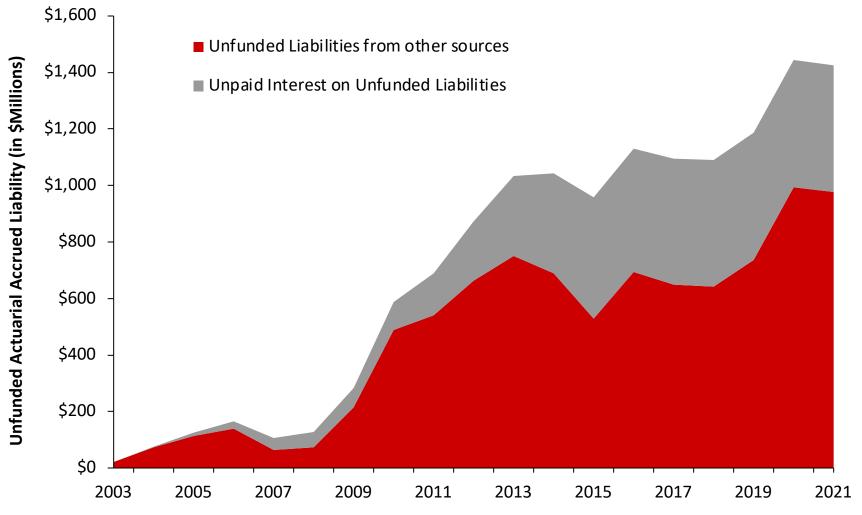


Debt Management Policies

Interest Added to Unfunded Liability

NDPERS Negative Amortization Growth, 2003-2021





Source: Pension Integrity Project analysis of NDPERS actuarial valuation reports and CAFRs

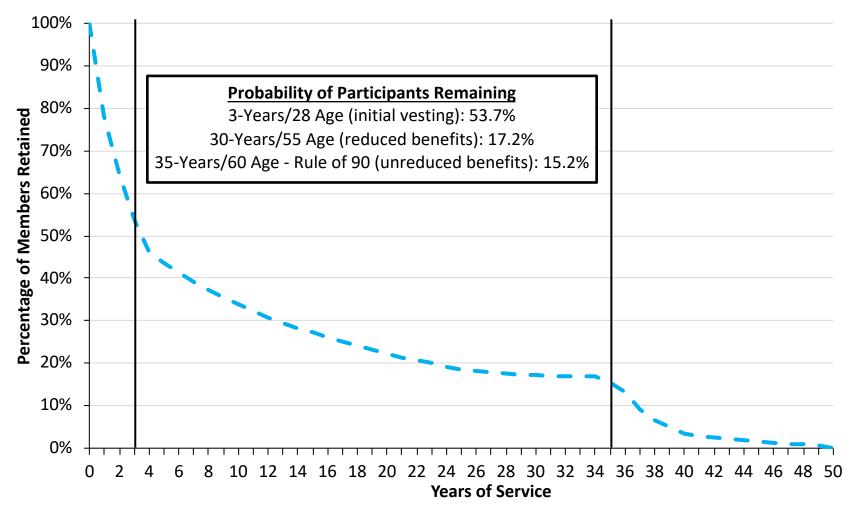


THE EXISTING BENEFIT DESIGN DOES NOT WORK FOR EVERYONE

 The turnover rate for members of NDPERS suggests that the current retirement benefit design is not supporting goals for retention

Probability of Members Remaining in NDPERS





Source: Pension Integrity Project analysis of NDPERS reports and CAFRs.

Illustration is based on *Main Plan* assumptions and a hypothetical analysis of an average member hired at the age of 25

Do NDPERS Retirement Plans Work for All Employees?



46% of new NDPERS members leave before 3 years

- Benefited employees must work 3 years before their benefits become vested.
- Members who leave the plan before then must forfeit contributions their employer made on their behalf.
- Another 20% of new employees who are still working after 3 years will leave before 10 years of service.
- 17% of all new paid members hired next year will still be working after 30 years (with age 55), long enough to qualify for a reduced benefits.
 - North Dakota ensures that all state employees have access to Social Security benefits.

Recruiting and Retaining Public Employees



Recruiting a 21st Century Workforce:

- There is little evidence that retirement plans DB, DC, or other design — are a major factor in whether an individual wants to enter public employment.
- The most likely incentive to increase recruiting to the public workforce is increased salary.

Retaining Employees:

- If worker retention is a goal of the NPDERS system, it is clearly not working, as nearly half of new hires leave within 3 years.
- After 25 years of service there is some retention effect, but the same incentives serve to push out workers in a sharp drop off after 30 years of service.

ALTERNATIVE RETIREMENT PLAN DESIGN OPTIONS





The following analysis is for the purposes of comparing long-term costs and funding outcomes of various retirement plan options for policy guidance.

This is for information purposes only and not an endorsement of any particular reform concept.

Protecting Benefits Through a Transition



Defined Benefit Pension Plans Are Not Like Social Security

- ✓ Healthy pension plans use employer and employee contributions, combined with anticipated investment earnings, to fully fund promised benefits in advance.
- ✓ Pension plans are designed to be prefunded, meaning each year the state and employees are responsible for paying enough into the plan to cover all benefits earned that year.
- ✓ Employee contributions to LASERS are the property of the employee and should not subsidize current retirees.

New Members

Are Not Required

To Keep Public

Pension Plans

Solvent.

There is No "Transition Cost" with New Retirement Plans

- ✓ The idea of an inherent "*transition cost*" when adopting a new retirement plan design for new hires is a <u>myth</u>. There is no legal requirement to increase contributions in transitioning to a new plan.
- ✓ Unfunded pension benefits would still need to be paid off by the state along with the costs to fund new accruals in both the legacy and new pension plans, but there is no additional cost inherent to offering additional retirement plan options to employees.
- ✓ Like today, growth in unfunded liabilities within the closed plan would simply be a result of the state continuing to tolerate unrealistic actuarial assumptions, weak funding policies, overly lengthy amortization policies, and other drivers of pension debt in the legacy pension plan.

Planning For A Transition To A New Tier

- ✓ When opening a new retirement plan—or providing a choice of plans— to new hires, policymakers must have a strategy in place to continue paying down legacy debts at either the existing or an accelerated pace to ensure long-term cost savings.
- The most effective way to do this is for the employer to make a supplemental payment toward unfunded liabilities for every new hire, just as if the reform never happened and the legacy pension was still the only retirement option.



DC+DB CHOICE PLAN DESIGN

Overview



This analysis examines alternative plan design concepts for the North Dakota Public Employees Retirement System

Featuring for New Hires:

- Expanding access to the optional defined contribution plan to all new workers.
- Splitting the risk through cost-sharing mechanisms for all new hires who select the DB plan.

Concepts envisioned as alternative plan designs for new hires

- The current defined benefit retirement plan would remain for those workers and retirees already enrolled.
- All new members would have a choice between a <u>new</u> defined benefit plan (structured to reduce the risk of underfunding and runaway costs), an expanded defined contribution plan, a hybrid plan, and a cash balance plan.
- Choices allow workers to self-select the most appropriate benefit for themselves.

DC+DB Choice Plan Design



Giving all <u>new</u> workers the choice between a new reducedrisk DB plan and a well-structured DC plan.

DC Plan

- Opened to all new workers (currently only available to nonclassified and elected officials)
- 7% required employee contributions
- 7% required employer contributions

New DB Plan

- More realistic assumed rate of return
- Cost sharing for all new normal cost and amortization payments
- Same underlying benefit as the existing DB plan
- Defaults will largely determine the share of incoming members that end up in either the DB or DC plan. The following proposal uses the DC plan as the default for new workers.

Reduced-Risk DC+DB Choice for Employers

Regulates cost better than the existing standalone DB plan, because the risk-managed DB benefit will not be as vulnerable to market volatility and unpredictability

Limits risk by increasing the number of those taking the DC option, which means more workers accruing stable, predictable benefits



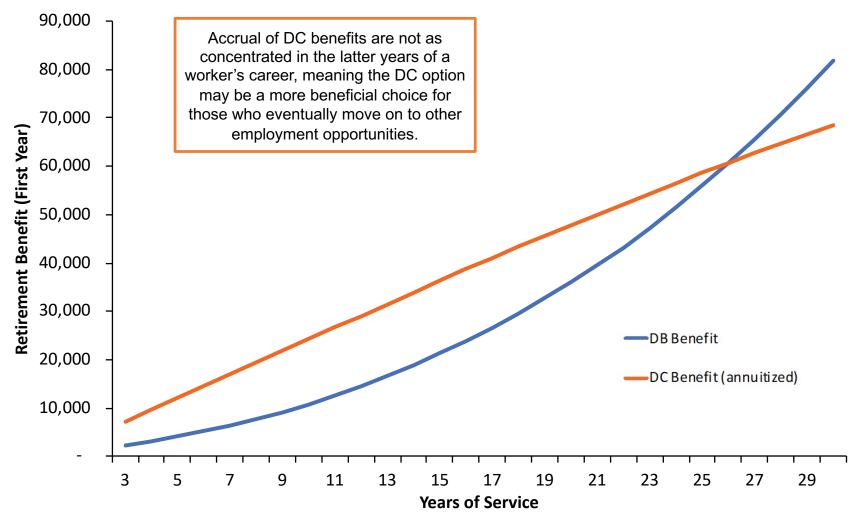
States that Use a DC-Choice Plan:

- Arizona
- Colorado
- Michigan
- Pennsylvania
 - Utah
 - Florida
- South Carolina

Any new retirement plan for new hires would need to be paired with a sustainable plan to pay down legacy unfunded liabilities.

NDPERS Benefit Comparison: DC vs DB





Source: Pension Integrity Analysis of NDPERS benefit accrual. Analysis assumes new member starts at age 35 with salary of \$35,000.

Modeling Scenarios



Current State: Reflects current NDPERS actuarial assumptions and methods.

Actuarial (ADEC) Funding Policy: Similar to HB1209 Proposed in 2021 Session, 20 year, closed, layered.

DC+DB Choice: Closes the current DB plan to all new hires in exchange for the option between a new, risk-managed 50/50 cost sharing DB plan or the existing DC plan.

- ✓ The Legislature would determine which plan new hires are
 defaulted into provided no selection is made.
- ✓ Modeling results displayed assume a DC default policy.

Stress Testing Proposed DC+DB Choice Design Using Crisis Simulations

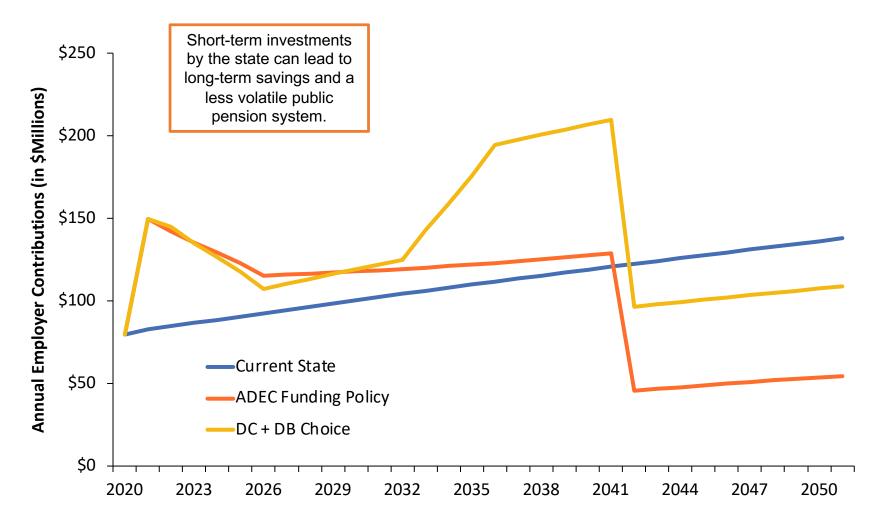


- Applying market stress to the various scenarios highlights the resiliency of each design.
- Recognizing expert consensus regarding a diminishing capital market outlook, scenarios assume a 6% fixed annual return between crisis scenarios.

```
6% Annual Returns
+
Market Stress = 2021 Recession
+
2038 Recession
```

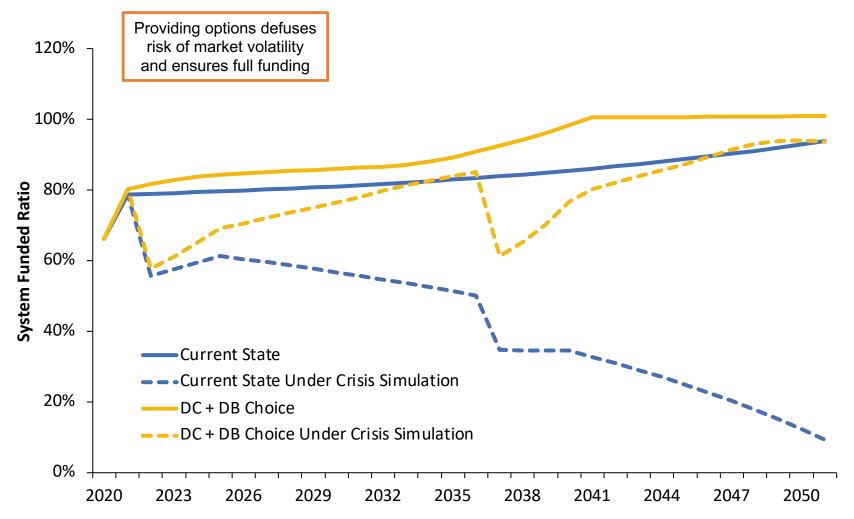
Plan Design Affects Annual Contributions





DC+DB Choice Prioritizes Full Funding

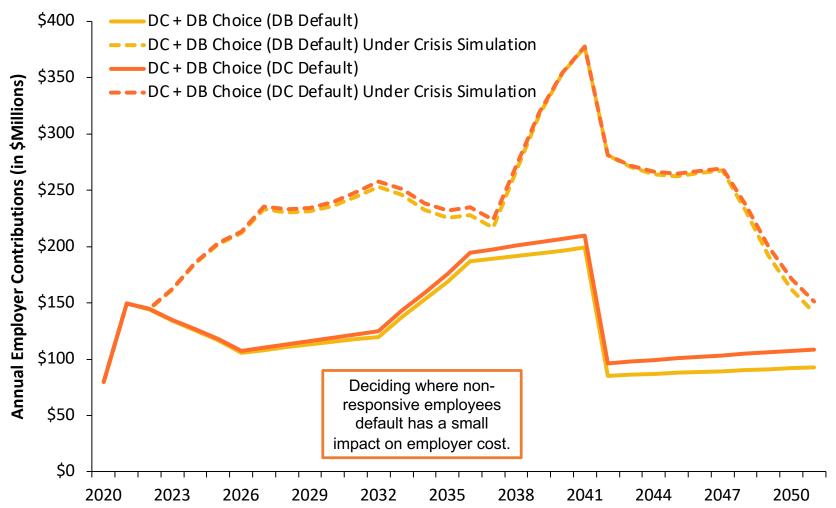




Source: Pension Integrity Project actuarial forecast of NDPERS. The DB+DC Choice scenarios uses ADEC contributions and a DC default.

DC+DB Choice Defaults Set State Cost





Long Term Results of Different Proposals

	7% Returns			Two Recessions + 6% Returns			
Plan Design	30-Year Employer Contributions DB	2050 Unfunded Liability	Total All-in Employer Costs	30-Year Employer Contributions DB	2050 Unfunded Liability	Total All-in Employer Costs	
Current State	\$3.4 B	\$0.4 B	\$3.8 B	\$3.4 B	\$5.8 B	\$9.2 B	
ADEC Funding Policy	\$3.0 B	\$(0.1)	\$2.9 B	\$6.1 B	\$1.2 B	\$7.3 B	
DC+DB Choice (DB Default)	\$3.8 B	\$(0.1)	\$3.7 B	\$7.1 B	\$0.3 B	\$7.4 B	
DC+DB Choice (DC Default)	\$4.0 B	\$0	\$4.0 B	\$7.2 B	\$0.2 B	\$7.5 B	

Key Takeaways

- Paying the full ADEC rate is crucial for NDPERS to achieve full funding and save billions in long-term costs
- North Dakota's existing DC plan requires higher contributions than the DB plan, meaning it is currently more expensive per member

By making prudent funding policy changes to the legacy plan and opening workers' eligibility to an already available DC option, costs will increase short-term, but the retirement benefit will be more stable, and costs will be more manageable—and likely lower—long-term

 However, there is no guarantee that this will continue to be the case going forward. With amortization payments growing, contributions towards the DB are close to surpassing those structured in the DC plan.

Defined Contribution Reform Best Practices



1. Contributions Should Meet Benefit Adequacy Standards

- Financial experts strongly recommend contributions 10 to 15 percent of pre-tax earnings into a retirement account.
- Older workers with a closer retirement horizon and inadequate savings may need to contribute even more.

2. Encourage Use of Target Date Funds

Well-designed DC plans should also offer the correct age appropriate investment mix. This is generally accomplished by using target date funds that adjust investment risk to the employee's retirement horizon to protect the value of the account from market fluctuations as the worker nears retirement.

3. Expand Lifetime Income Options to Improve Retirement Security

- The mix of proprietary investment funds and reasonably priced target-date funds give participants "one-choice" options.
- Guaranteed investments should be included in the target-date portfolio constructions and options like deferred annuities.

Defined Benefit Reform Best Practices



Adopt Better Funding Policy, Risk Assessment, And Actuarial Assumptions

- Lower the assumed rate of return to align with independent actuarial recommendations.
- These changes should aim at minimizing risk and contribution rate volatility for employers and employees.

Establish A Plan To Pay Off The Unfunded Liability As Quickly As Possible

- The Society of Actuaries Blue Ribbon Panel recommends amortization schedules be no longer than 15 to 20 years.
- Reducing the amortization layering period would save the state billions in interest payments.

3. Review Current Plan Options To Improve Retirement Security

 Consider expanding current retirement options that create a pathway to lifetime income for employees that do not stay in public service.

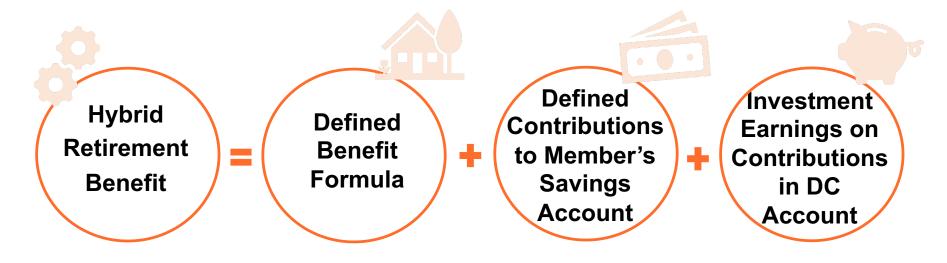


DC+DB HYBRID PLAN DESIGN

Prospective Hybrid Design Alternative



This analysis examines a new hybrid retirement plan design concept for North Dakota's future public workforce that pairs a predefined lifetime benefit with an individual retirement savings account.



The **current retirement plan remains intact** for all active members and retirees without change or interruption. Fully funding all earned benefits is required for effective reform.

What is a Hybrid Retirement Plan?



Benefits

• A standard hybrid retirement plan design provides members with a guaranteed return plan—a risk managed defined benefit pension with a lower multiplier than a traditional pension—along with an individual investment account.

Investments

Assets of hybrid retirement plans are separated into two pools. The defined benefit pool is combined with other
members' assets and invested at the direction of the board trustees as plan fiduciaries. The defined contribution
pool is segmented from other members' assets and professionally managed in an employer-sponsored retirement
system. The employer bears the investment risks associated with the defined benefit but bears no risk for the
defined contribution pool of assets.

Lifetime Income

Hybrid retirement plans offer lifetime annuities through the defined benefit portion of the benefit and provides an
additional retirement savings (defined contribution) account credited through contributions and investment returns. At
retirement, the member may choose to withdraw the lump sum of their defined contribution account or purchase an
annuity.

Benefits of a Hybrid for Employers



<u>Limits risk</u> better than a traditional DB plan, because the guaranteed DB benefit is smaller and thus exposed to less market risk.

Regulates cost by predetermining employee and employer contributions to the DC. These costs do not rise or fall with investment earnings, making them appealing as another source of guaranteed pension dollars."

States with Hybrid Retirement Plans

For many states and municipalities, the unfunded liabilities of traditional defined-benefit pension plans present an increasing challenge to their budgets and credit rating.

Benefit of a Hybrid for Employees



- For non-career employees a hybrid is a far better choice than a traditional DB pension plan.
- Hybrids allow the DC portion of the benefit to go with the employee if they change careers.
- A member of a traditional DB pension system is only entitled to a <u>refund of the contributions in</u> <u>their retirement account</u> if they choose to change careers prior to vesting.

Hybrid Example – Federal Employees



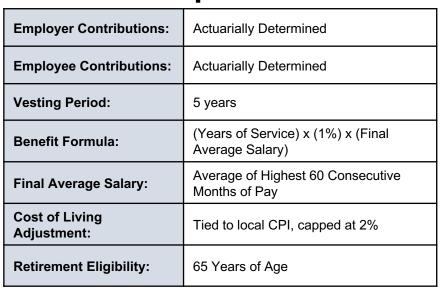
Federal Employees Retirement System (FERS)

- All federal employees hired after 1/1/1984 are in the hybrid.
- Defined Benefit Pension
 - √1% multiplier x years of service x final average salary
- Defined Contribution Thrift Savings Plan
 - Members can contribute any amount up to the annual IRS limit.
 - ✓ Employers automatically contribute 1% and will match up to 5% total.

Conceptual Hybrid Plan Basics



Defined Benefit Components





Defined Contribution Components

Employer Contributions:	Minimum 3%, matching up to 5%
Employee Contributions:	Minimum 3% Up to IRS Annual Limit
Vesting Period:	50% - Year 1 75% - Year 2 100% - Year 3
Retirement Eligibility:	65 Years of Age

Defined Benefit Rules

Assumed Rate of Return:	6% (max)	
Discount Rate:	6% (max)	
Debt Amortization Policy:	10-year, layered, level dollar	
Cost of Living Adjustment Policy:	No COLA if plan drops below 90% funded.	



CASH BALANCE PLAN DESIGN

What is a Cash Balance (CB) Retirement Plan?



Cash balance retirement plans are designed to guarantee asset growth while providing a steady accrual rate, offering members portability, and ensuring a path to retirement security for all.

- **Benefits** A standard cash balance plan design provides members with their own individual retirement account within which they contribute a portion of their salary along with their employer, who adds an additional predetermined annual interest credit.
 - Both traditional defined benefit (DB) pensions and cash balance (CB) plan designs are examples of guaranteed return plans.
 - A CB designed plan defines a member's benefit as a constantly growing account balance, while a traditional DB pension plan defines a member's benefit using an accrual formula based on salary and years of service.
 - Cash balance plans credit a member's account each year with a "pay credit" (% of pay) and an "interest credit rate" (either a fixed rate or a variable rate linked to some formula).
- **Investments** Assets of cash balance plans are pooled and professionally managed in a government-sponsored retirement system. Thus, the employer bears the investment risks.
 - The interest credit functions like a DB mechanism in that this interest credit is guaranteed, usually at or just above the risk-free rate, and any plan investment experience below the assumed rate is borne by the employer.
- Life Annuities Cash balance plans are required to offer employees the ability to receive their benefits in the form of lifetime annuities.
 - When a member elects to retire, their annuity benefit will be based on their final account balance. Conversely, most cash balance plans allow the members the flexibility to simply take a lump sum of their account balance in lieu of receiving an annuity.

Cash Balance Retirement Benefit

Annual Employee Contributions

- + Annual Employer Contributions
- + Annual Interest Credit
 - + Upside Sharing

Benefits of a Cash Balance Plan for Employers



Fixed contributions generally benefit the employer's ability to forecast and manage costs over the long-term.

Reduces risk of accruing unfunded liabilities on behalf of new members.

States With At Least One Cash Balance Plan:

- California
- Kansas
- Kentucky
- Nebraska
 - Texas

Allowing new hires to join a cash balance plan has no impact positively or negatively on current members or the plan's unfunded liabilities associated with current members and retirees.

Any new retirement plan for new hires would need to be paired with a sustainable plan to pay down legacy unfunded liabilities.

Benefits of a Cash Balance Plan for Employees



Portability allows members to take their full account balance with them whenever they leave public employment.

Return Guarantees offer predictability to plan members by removing much of the investment risk, yet still can offer upside gainsharing during years of extraordinary investment performance.

Cash Balance Example – Kentucky Retirement		
Employer Contribution Rate:	4%, 7.5% for public safety	
Employee Contribution Rate:	5%, 8% for public safety	
Interest Credit:	4%	
Upside Sharing:	75% (of five-year average returns above 4%)	
Vesting Period:	5-Years	

<u>Turnkey Options</u> allow members to lean on investment professionals and removes the need for members to manage their own investment portfolios.

• In a CB plan, the employee and employer contributions are co-mingled and the state manages the investments in the plan just as it does in a traditional DB pension plan.

Cash Balance Design Costs vs. Risks



Costs:

 A cash balance plan with fixed employer contributions and a guaranteed interest crediting rate (+ upside share) that is lower than the current assumed investment return assumption could reduce employers' direct costs of providing lower-risk—but still guaranteed—benefits that resemble traditional DB pensions.

Risks:

- Similar to a DB pension, CB plan assets are managed by the employer, who bears the investment risks.
- Yet, setting a guaranteed rate benefit reduces downside risks for employers by removing the plan's reliance on market and demographic assumptions.
- Employees also enjoy a contribution floor guarantee and benefit from upside sharing of investment returns above the floor.

Cash balance plans can still accrue unfunded liabilities if investments severely underperform; however, risks are lower compared to a DB design that is subject to gains and losses from actuarial experiences.



FRAMEWORK FOR SOLUTIONS & REFORM

Objectives of Good Reform



Keeping Promises: Ensure the ability to pay 100% of the benefits earned and accrued by active workers and retirees

Retirement Security: Provide retirement security for all current and future employees

Predictability: Stabilize contribution rates for the long-term

Risk Reduction: Reduce pension system exposure to financial risk and market volatility

Affordability: Reduce long-term costs for employers/taxpayers and employees

Attractive Benefits: Ensure the ability to recruit 21st Century employees

Good Governance: Adopt best practices for board organization, investment management, and financial reporting

Practical Policy Framework



- 1. Establish a plan to pay off the unfunded liability as quickly as possible.
 - NDPRES effectively has an infinite amortization period that currently creates perpetual debt that will never be paid off.
 - Funding NDPERS using an ADEC rate ensures current and future debt is amortized.
 - Moving from an open to a closed amortization period also ensures any debt will be fully paid off within a guaranteed period.
- Better funding policy, risk assessment, and actuarial assumptions
 - Lower the assumed rate of return to align with independent actuarial recommendations.
 - These changes can be made while minimizing risk and contribution rate volatility for employers and employees.
- Review current plan options to improve retirement security
 - Consider offering additional retirement options that create a pathway to lifetime income for employees that do not stay in public service.

Moving Forward



- We are building a tool that will allow everyone on this committee to run all these numbers yourself.
 - Should be ready before Thanksgiving.
 - Will be able to model different scenarios based on returns, return assumptions, asset allocation, etc.
- We have two best practice in pension design papers out currently, with papers on hybrid and cash balance plans in review.
 - Best Practice in DC Design: https://reason.org/policy-brief/best-practices-in-the-design-and-utilization-of-public-sector-defined-contribution-plans/
 - Best Practices in Incorporation Risk Sharing in DB Plans: https://reason.org/policy-brief/best-practices-in-incorporating-risk-sharing-into-defined-benefit-pension-plans/
- Updated solvency analysis of NDPERS is in progress.

Questions?



Pension Integrity Project at Reason Foundation

Ryan Frost, Policy Analyst

ryan.frost@reason.org